

## INFORMATION SHEET

INFORMATION SHEET – ORDER NO. R5-2009-\_\_\_\_\_  
CITY OF WOODLAKE  
WASTEWATER TREATMENT PLANT  
TULARE COUNTY

### **Background**

Woodlake (hereafter Discharger) operates a Wastewater Treatment Facility (WWTF) located a mile south of the City. The WWTF is regulated by Waste Discharge Requirements (WDRs) Order No. 5-01-076 that authorizes a discharge of 1.0 million gallons per day (mgd) of undisinfected secondary treated wastewater to four percolation ponds, and one emergency pond. Water Reclamation Requirements (WRRs) Order No. 01-082 regulates the discharge of treated wastewater to 35 acres of farmland owned by Sentinel Butte Water Company. The WWTF is also regulated by Cease and Desist Order (CDO) No. 5-01-077 to address effluent Biochemical Oxygen Demand (BOD) and Total Suspended Solids (TSS) exceedences.

In July 2008 the Discharger submitted a Report of Waste Discharge (RWD) proposing to expand the WWTF in two phases. The peak daily flow and peak monthly flow will be approximately 1.87 mgd and 1.38 mgd, respectively, for Phase One and about 2.52 mgd and 1.92 mgd, respectively, for Phase Two. In Phase One a new headworks and magnetic flow meter will be installed. There will be two treatment trains running in parallel. Each treatment train will consist of one 0.60 mgal oxidation ditch, and one 0.20 mgal anoxic basin, and one two 55-foot diameter secondary clarifiers. The aerated lagoons will be converted to asphalt lined sludge drying beds and two new percolation ponds will be constructed.

WDRs Order No. 5-01-076 is being updated by this Order. With the construction of additional percolation ponds the WWTF will have enough storage capacity for the 1.38 mgd expansion. WRRs for the 35 acres of farmland owned by Sentinel Butte Water Company will be updated separately.

### **Solids and Biosolids Disposal**

Because the unlined sludge drying beds are a potential source of groundwater degradation, the Discharger is proposing to line the sludge drying beds with asphalt. According to the RWD dry sludge will continue to be hauled off site after the construction of the upgraded WWTF.

### **Groundwater Conditions**

The groundwater monitoring network in the vicinity of the WWTF consists of three groundwater monitoring wells (MW-1 through MW-3) that were installed in October 2000. After the groundwater monitoring wells were installed, Central Valley Water Board staff determined it was inadequate because the monitoring wells were monitoring two different groundwater zones. The Discharger did not submit analytical data and never initiated groundwater monitoring of the wells.

In June 2007 the Discharger submitted a Work Plan for the installation of a new groundwater monitoring network. The Work Plan proposed to use two of the existing groundwater monitoring wells (MW-2 and MW-3) along with three new wells. If after the installation of the new wells, MW-2 and MW-3 are not similar and the direction of groundwater cannot be determined from these wells, an additional well will need to be installed.

### **Compliance History**

The most recent Notice of Violation (NOV) was issued to the Discharger on 2 April 2007 for violating Discharge Specification B.3 and discharging wastewater that exceeds the monthly average and daily maximum of 40 mg/L and 80 mg/L, respectively, for both BOD and TSS.

Monitoring and Reporting Program (MRP) No. 5-01-076 requires the Discharger to monitor source water EC on a quarterly basis, and source water TDS once every three years. For several years the Discharger did not report source water EC and TDS until it was brought to its attention by Central Valley Water Board staff. The Discharger began monitoring source water and reporting the results in its August and December 2008 SMRs.

The MRP also requires the Discharger to submit quarterly groundwater monitoring data. To date no records indicate that groundwater monitoring data was submitted to the Central Valley Water Board.

### **Basin Plan, Beneficial Uses, and Regulatory Considerations**

The Basin Plan indicates the greatest long-term water quality problem facing the entire Tulare Lake Basin is increasing salinity in groundwater, a process accelerated by man's activities and particularly affected by intensive irrigated agriculture. The Basin Plan recognizes that degradation is unavoidable until there is a long-term solution to the salt imbalance. The Central Valley Water Board encourages proactive management of waste stream by dischargers to control addition of salt through use, and has established an incremental EC limitation of 500  $\mu\text{mhos/cm}$  or a 1,000  $\mu\text{mhos/cm}$ , as the measure of the maximum permissible addition of salt constituents through use.

The Basin Plan states that discharges to areas that may recharge good quality groundwaters shall not exceed an EC of 1,000  $\mu\text{mhos/cm}$ , a chlorine content of 175 mg/L, or boron content of 1.0 mg/L.

### **Antidegradation**

The antidegradation directives of State Water Board Resolution No. 68-16, "Statement of Policy with Respect to Maintaining High Quality Water In California," or "Antidegradation Policy" require that waters of the State that are better in quality than established water quality objectives be maintained "consistent with the maximum benefit to the people of the State." Water can be of high quality for some constituents or beneficial uses and not others. Policy and procedures for complying with directives are set forth in the Basin Plan. Degradation of groundwater by some of the typical waste constituents released with discharge from a municipal wastewater utility after effective source control, treatment, and control is consistent with maximum benefit to the people of the State. The technology, energy, water recycling, and waste management advantages of municipal utility service far exceed any benefits derived from a community otherwise reliant on numerous concentrated individual wastewater systems, and the impact on water quality will be substantially less. Economic prosperity of valley communities and associated industry is of maximum benefit to the people of the State, provided terms of the Basin Plan are met.

Constituents of concern in the discharge that have the potential to degrade groundwater include salts and nutrients. However, the discharge will likely not impair the beneficial uses of groundwater because:

- a. For salinity, the Basin Plan contains effluent limits for EC of source water plus 500  $\mu\text{mhos/cm}$  and 1,000  $\mu\text{mhos/cm}$  maximum for discharges to areas that may recharge to good quality groundwater. These limits considered the antidegradation policy when adopted. The current discharge meets the source water plus 500  $\mu\text{mhos/cm}$  limit, and is also less than the lowest numerical limit to protect the most sensitive agricultural use (700  $\mu\text{mhos/cm}$ ).
- b. For nitrogen, the upgraded WWTF will treat to less than 10 mg/L. Therefore, any degradation that may occur from the discharge would not exceed a Water Quality Objective nor impair a Beneficial Use.

### **Treatment Technology and Control**

The expansion project will provide treatment and control of the discharge that incorporates:

- a. Secondary treatment of the wastewater;
- b. Appropriate biosolids handling and treatment for reuse;
- c. An operation and maintenance (O&M) manual;
- d. Certified operators to insure proper operation and maintenance; and
- e. Discharge and groundwater monitoring.

### **Title 27**

Title 27, CCR, section 20005 et seq. (Title 27) contains regulations to address certain discharges to land. Title 27 establishes a waste classification system, specifies siting and construction standards for full containment of classified waste, requires extensive monitoring of groundwater and the unsaturated zone for any indication of failure of containment, and specifies closure and post-closure maintenance requirements. Generally, no degradation of groundwater quality by any waste constituent in a classified waste is acceptable under Title 27 regulations.

Discharges of domestic sewage and treated effluent can be treated and controlled to a degree that will not result in unreasonable degradation of groundwater. For this reason, they have been conditionally exempted from Title 27. Treatment and storage facilities for sludge that are part of the WWTF are considered exempt from Title 27 under section 20090(a), provided that the facilities not result in a violation of any water quality objective. However, residual sludge (for the purposes of the proposed Order, sludge that will not be subjected to further treatment by the WWTF) is not exempt from Title 27. Solid waste (e.g., grit and screenings) that results from treatment of domestic sewage and industrial waste also is not exempt from Title 27. This residual sludge and solid waste are subject to the provisions of Title 27.

Accordingly, the municipal discharge of effluent and the operation of treatment or storage facilities associated with a municipal wastewater treatment plant can be allowed without requiring compliance with Title 27 because the resulting degradation of groundwater will be in accordance with the Basin Plan.

### **CEQA**

A Final Environmental Impact Report (FEIR), State Clearinghouse Number 2009041134, dated June 2009 was adopted for the proposed WWTF upgrade to an ultimate design flow of 1.8 mgd.

## **Proposed Order Terms and Conditions**

### **Discharge Prohibitions, Specifications and Provisions**

The proposed Order prohibits discharge to surface waters and water drainage courses and cross connection between potable water and well water piping with recycled water piping.

The proposed Order would set a monthly average flow limit of 1.38 mgd, with effluent limits for BOD<sub>5</sub> and TSS of 40 mg/L monthly average and 80 mg/L daily maximum. These limitations are based on Basin Plan minimum performance standards for municipal facilities.

The provisions regarding pond dissolved oxygen, pH, and freeboard are consistent with Central Valley Water Board policy for the prevention of nuisance conditions, and are applied to all such facilities.

The proposed Order would prescribe groundwater limitations that implement water quality objectives for groundwater from the Basin Plan. The limitations require that the discharge not cause or contribute to exceedances of these objectives or natural background water quality, whichever is greater.

The proposed Order includes Provisions that would require the Discharger to install an adequate groundwater monitoring network. The Order would also provide a time schedule for the Discharger to submit a Work Plan for the construction of berms, or other engineering controls, that will prevent inundation during a 100-year event, and a performance demonstration of the lined sludge drying beds.

### **Monitoring Requirements**

The proposed Order includes influent and effluent monitoring requirements, pond monitoring, groundwater monitoring, source water monitoring, sludge monitoring, and Reclamation Area monitoring. This monitoring is necessary to characterize the discharge, evaluate compliance with effluent limitations prescribed by the Order, and evaluate groundwater quality and the extent of the degradation caused by the discharge.

The Discharger must monitor groundwater for waste constituents expected to be present in the discharge, and capable of reaching groundwater and violating groundwater limitations if its treatment, control, and environmental attenuation, proves inadequate. For each

constituent of concern, the Discharger must, as part of each monitoring event, compare concentrations of constituents found in each monitoring well (or similar type of groundwater monitoring device) to the background concentration or to prescribed numerical limitations to determine compliance.

### **Proposed Enforcement Order**

The Discharger cannot comply with the effluent limitations of the existing Order and proposed Order due to lack of treatment. Once the Expansion Project is completed, the Discharger shall be able to comply with the terms and conditions of the proposed Order. An accompanying draft Cease and Desist Order provides a time schedule for the Discharger to complete the Expansion Project.

### **Reopener**

The conditions of discharge in the proposed Order were developed based on currently available technical information and applicable water quality laws, regulations, policies, and plans, and are intended to assure conformance with them. It may be appropriate to reopen the Order if applicable laws and regulations change.

DMS/dkp: 8/06/2009